

# Appendix

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## Appendix

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## Population, Vehicle Miles Traveled, Injuries, and Deaths (Utah 1947-2009)

Persons						
Year	Population	Vehicle Miles Traveled (VMT)	Injuries		Deaths	
			#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT
1947	636,000	2,132,000,000	3,747	175.8	186	8.72
1948	653,000	2,351,000,000	3,982	169.4	220	9.36
1949	670,800	2,475,000,000	3,808	153.9	174	7.03
1950	695,900	2,839,000,000	4,459	157.1	188	6.62
1951	706,100	3,015,000,000	5,132	170.2	207	6.87
1952	724,000	3,050,000,000	5,140	168.5	246	8.07
1953	739,100	3,232,000,000	4,945	153.0	209	6.47
1954	750,500	3,336,000,000	4,495	134.7	209	6.26
1955	782,800	3,075,000,000	5,036	163.8	203	6.60
1956	808,800	3,310,000,000	4,812	145.4	215	6.50
1957	826,300	3,366,000,000	5,022	149.2	222	6.60
1958	845,200	3,531,000,000	5,658	160.2	193	5.47
1959	869,900	3,784,000,000	5,992	158.4	205	5.42
1960	900,000	3,852,000,000	9,128	237.0	256	6.65
1961	936,000	3,997,000,000	10,412	260.5	236	5.90
1962	958,000	4,240,000,000	11,133	262.6	233	5.50
1963	974,000	4,549,000,000	12,603	277.0	263	5.78
1964	978,000	4,790,000,000	14,096	294.3	295	6.16
1965	991,000	4,997,000,000	14,361	287.4	281	5.62
1966	1,009,000	5,079,000,000	14,994	295.2	331	6.52
1967	1,019,000	5,257,000,000	14,401	273.9	275	5.23
1968	1,029,000	5,539,000,000	15,539	280.5	289	5.22
1969	1,047,000	5,802,000,000	15,977	275.4	308	5.31
1970	1,066,000	6,108,000,000	17,076	279.6	335	5.48
1971	1,101,150	6,544,000,000	18,073	276.2	337	5.15
1972	1,135,100	6,969,000,000	18,261	262.0	382	5.48
1973	1,168,950	7,274,000,000	18,415	253.2	361	4.96
1974	1,196,950	7,457,000,000	16,268	218.2	228	3.06
1975	1,233,900	7,942,000,000	17,762	223.6	274	3.45
1976	1,272,050	8,420,000,000	18,315	217.5	254	3.02
1977	1,315,950	9,054,000,000	19,728	217.9	360	3.98
1978	1,363,750	9,826,000,000	21,029	214.0	376	3.83
1979	1,415,950	9,811,000,000	20,798	212.0	328	3.34
1980	1,474,000	10,645,000,000	17,828	167.5	335	3.15
1981	1,515,000	10,733,000,000	18,090	168.5	364	3.39
1982	1,558,000	10,947,000,000	17,538	160.2	296	2.70
1983	1,595,000	11,228,000,000	18,910	168.4	283	2.52
1984	1,622,000	11,642,000,000	20,487	176.0	315	2.71
1985	1,643,000	12,035,000,000	21,346	177.4	303	2.52
1986	1,663,000	12,253,000,000	21,350	174.2	312	2.55
1987	1,678,000	12,679,000,000	19,237	151.7	297	2.34
1988	1,690,000	13,229,853,875	19,066	144.1	297	2.24
1989	1,706,000	13,933,977,565	19,843	142.4	303	2.17
1990	1,729,227	14,649,064,030	20,608	140.7	272	1.86
1991	1,780,870	15,390,400,930	19,540	127.0	271	1.76

POPULATION  
SOURCE: State of Utah  
Population Estimates,  
Demographic and  
Economic Analysis,  
[www.governor.utah.gov/dea](http://www.governor.utah.gov/dea)

VEHICLE MILES  
TRAVELED SOURCE:  
Utah Department of  
Transportation, Utah  
Highway Performance  
Monitoring System,  
[www.udot.utah.gov](http://www.udot.utah.gov)

## Population, Vehicle Miles Traveled, Injuries, and Deaths (Utah 1947-2009)

Persons (continued)						
Year	Population	Vehicle Miles Traveled (VMT)	Injuries		Deaths	
			#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT
1992	1,838,149	16,263,289,670	22,490	138.3	269	1.65
1993	1,889,393	17,055,044,750	25,763	151.1	303	1.78
1994	1,946,721	18,091,944,321	28,436	157.2	343	1.90
1995	1,995,228	18,798,488,669	28,343	150.8	325	1.73
1996	2,042,893	19,433,341,748	30,711	158.0	321	1.65
1997	2,099,409	20,407,590,239	31,238	153.1	366	1.79
1998	2,141,632	21,236,980,216	30,232	142.4	350	1.65
1999	2,193,014	21,867,355,694	29,959	137.0	360	1.65
2000	2,246,553	22,517,131,427	30,086	133.6	373	1.66
2001	2,305,652	23,398,734,621	29,375	125.5	291	1.24
2002	2,358,330	24,438,992,554	30,433	124.5	328	1.34
2003	2,413,618	23,963,242,376	28,352	118.3	309	1.29
2004	2,469,230	24,641,658,091	29,638	120.3	296	1.20
2005	2,547,389	25,129,538,952	29,221	116.3	282	1.12
2006	2,615,129	26,166,885,473	27,433	104.8	287	1.10
2007	2,699,554	26,824,244,333	27,420	102.2	299	1.11
2008	2,757,779	25,883,467,343	24,672	95.3	276	1.07
2009	2,800,089	26,217,108,843	22,847	87.1	244	0.93
<b>Total</b>	<b>92,833,009</b>	<b>718,703,335,720</b>	<b>1,121,089</b>	<b>156.0</b>	<b>17,949</b>	<b>2.50</b>

## Crashes (Utah 1947-2009)

Crashes								
Year	Property Damage Only		Injury		Fatal		Total	
	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT
1947	6,123	287.2	2,603	122.1	159	7.46	8,885	416.7
1948	7,117	302.7	2,675	113.8	169	7.19	9,961	423.7
1949	8,327	336.4	2,614	105.6	151	6.10	11,092	448.2
1950	9,532	335.8	3,004	105.8	169	5.95	12,705	447.5
1951	12,806	424.7	3,495	115.9	174	5.77	16,475	546.4
1952	14,052	460.7	3,474	113.9	184	6.03	17,710	580.7
1953	12,883	398.6	3,305	102.3	185	5.72	16,373	506.6
1954	11,911	357.0	3,016	90.4	176	5.28	15,103	452.7
1955	14,504	471.7	3,390	110.2	166	5.40	18,060	587.3
1956	14,045	424.3	3,310	100.0	176	5.32	17,531	529.6
1957	15,476	459.8	3,397	100.9	181	5.38	19,054	566.1
1958	18,287	517.9	3,762	106.5	171	4.84	22,220	629.3
1959	19,389	512.4	3,946	104.3	171	4.52	23,506	621.2
1960	20,702	537.4	5,576	144.8	200	5.19	26,478	687.4
1961	19,278	482.3	6,257	156.5	197	4.93	25,732	643.8
1962	19,459	458.9	6,968	164.3	186	4.39	26,613	627.7
1963	19,344	425.2	7,798	171.4	198	4.35	27,340	601.0
1964	20,570	429.4	8,636	180.3	246	5.14	29,452	614.9
1965	20,427	408.8	8,856	177.2	242	4.84	29,525	590.9

## Crashes (Utah 1947-2009)

Crashes (continued)								
Year	Property Damage Only		Injury		Fatal		Total	
	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT	#	Rate Per 100 Million VMT
1966	20,616	405.9	9,076	178.7	265	5.22	29,957	589.8
1967	21,873	416.1	8,888	169.1	231	4.39	30,992	589.5
1968	24,724	446.4	9,550	172.4	258	4.66	34,532	623.4
1969	24,665	425.1	9,850	169.8	251	4.33	34,766	599.2
1970	24,168	395.7	10,722	175.5	276	4.52	35,166	575.7
1971	27,429	419.1	11,399	174.2	280	4.28	39,108	597.6
1972	27,914	400.5	11,630	166.9	312	4.48	39,856	571.9
1973	26,220	360.5	11,710	161.0	304	4.18	38,234	525.6
1974	20,637	276.7	10,560	141.6	204	2.74	31,401	421.1
1975	24,740	311.5	11,441	144.1	245	3.08	36,426	458.7
1976	22,435	266.4	11,685	138.8	225	2.67	34,345	407.9
1977	25,562	282.3	12,652	139.7	310	3.42	38,524	425.5
1978	28,946	294.6	13,423	136.6	315	3.21	42,684	434.4
1979	26,732	272.5	13,449	137.1	287	2.93	40,468	412.5
1980	21,589	202.8	11,701	109.9	292	2.74	33,582	315.5
1981	23,844	222.2	11,824	110.2	321	2.99	35,989	335.3
1982	26,425	241.4	11,504	105.1	263	2.40	38,192	348.9
1983	28,419	253.1	12,317	109.7	253	2.25	40,989	365.1
1984	33,738	289.8	13,477	115.8	274	2.35	47,489	407.9
1985	33,684	279.9	13,917	115.6	270	2.24	47,871	397.8
1986	32,426	264.6	13,988	114.2	276	2.25	46,690	381.0
1987	33,386	263.3	13,599	107.3	271	2.14	47,256	372.7
1988	35,614	269.2	13,377	101.1	258	1.95	49,249	372.3
1989	37,110	266.3	13,941	100.1	269	1.93	51,320	368.3
1990	37,823	258.2	14,632	99.9	236	1.61	52,691	359.7
1991	33,443	217.3	13,763	89.4	229	1.49	47,435	308.2
1992	34,760	213.7	15,665	96.3	235	1.44	50,660	311.5
1993	38,357	224.9	17,088	100.2	259	1.52	55,704	326.6
1994	40,243	222.4	18,726	103.5	303	1.67	59,272	327.6
1995	37,532	199.7	19,828	105.5	284	1.51	57,644	306.6
1996	40,225	207.0	20,988	108.0	292	1.50	61,505	316.5
1997	33,512	164.2	21,131	103.5	309	1.51	54,952	269.3
1998	34,337	161.7	19,427	91.5	308	1.45	54,072	254.6
1999	32,971	150.8	19,513	89.2	318	1.45	52,802	241.5
2000	33,269	147.7	19,564	86.9	318	1.41	53,151	236.0
2001	33,113	141.5	19,332	82.6	258	1.10	52,703	225.2
2002	33,542	137.2	19,552	80.0	274	1.12	53,368	218.4
2003	31,842	132.9	18,285	76.3	262	1.09	50,389	210.3
2004	34,222	138.9	19,423	78.8	260	1.06	53,905	218.8
2005	35,158	139.9	19,545	77.8	235	0.94	54,938	218.6
2006	37,674	144.0	18,264	69.8	249	0.95	56,187	214.7
2007	42,368	157.9	18,619	69.4	258	0.96	61,245	228.3
2008	38,997	150.7	17,125	66.2	245	0.95	56,367	217.8
2009	35,398	135.0	15,752	60.1	217	0.83	51,367	195.9
<b>Total</b>	<b>1,655,914</b>	<b>230.4</b>	<b>737,984</b>	<b>102.7</b>	<b>15,360</b>	<b>2.14</b>	<b>2,409,258</b>	<b>335.2</b>

## County Population and Vehicle Miles Traveled (Utah 2009)

County		
County	Vehicle Miles Traveled	Population
Beaver	248,115,514	6,576
Box Elder	917,671,498	49,421
Cache	861,094,707	114,276
Carbon	298,141,117	19,768
Daggett	30,873,135	988
Davis	2,702,081,954	307,656
Duchesne	228,926,743	17,368
Emery	326,440,398	10,848
Garfield	118,254,762	5,149
Grand	341,154,838	9,493
Iron	702,216,514	46,825
Juab	384,655,938	10,191
Kane	142,718,355	6,740
Millard	455,391,362	13,702
Morgan	134,143,043	9,947
Piute	30,475,040	1,479
Rich	48,524,322	2,329
Salt Lake	8,518,653,933	1,042,125
San Juan	288,251,457	15,643
Sanpete	217,721,175	27,646
Sevier	341,143,192	20,773
Summit	710,815,253	40,451
Tooele	831,306,456	59,117
Uintah	355,502,991	31,291
Utah	3,652,018,328	531,442
Wasatch	304,798,580	23,428
Washington	1,362,778,935	145,466
Wayne	41,024,805	2,692
Weber	1,622,214,496	227,259
<b>Statewide</b>	<b>26,217,108,843</b>	<b>2,800,089</b>

VEHICLE MILES TRAVELED SOURCE:  
Utah Department of Transportation, Utah  
Highway Performance Monitoring System,  
[www.udot.utah.gov](http://www.udot.utah.gov)

POPULATION SOURCE: State of Utah  
Population Estimates, Demographic and  
Economic Analysis,  
[www.governor.utah.gov/dea](http://www.governor.utah.gov/dea)

## Number of Licensed Drivers by Age (Utah 2009)

Licensed Drivers		
Age	#	%
15-19	130,394	7.2%
20-24	199,848	11.1%
25-29	220,246	12.2%
30-34	206,880	11.5%
35-39	170,303	9.4%
40-44	144,860	8.0%
45-49	147,736	8.2%
50-54	143,732	8.0%
55-59	124,887	6.9%
60-64	99,755	5.5%
65-69	73,896	4.1%
70-74	53,778	3.0%
75-79	41,061	2.3%
80-84	28,809	1.6%
85+	20,523	1.1%
<b>Total</b>	<b>1,806,708</b>	<b>100.0%</b>

## Number of Licensed Drivers by Gender (Utah 2009)

Licensed Drivers		
Gender	#	%
Male	916,886	50.7%
Female	889,822	49.3%
<b>Total</b>	<b>1,806,708</b>	<b>100.0%</b>

SOURCE: Utah Department of Public Safety, Driver License Division

## Number of Registered Vehicles by Vehicle Type (Utah 2005-2009)

Vehicles					
Year	Heavy Truck	Light Truck	Motorcycle	Passenger Car	Total
2005	58,645	552,931	43,271	1,205,430	<b>1,860,277</b>
2006	60,765	564,280	48,949	1,243,041	<b>1,917,035</b>
2007	62,860	585,413	56,146	1,297,242	<b>2,001,661</b>
2008	66,578	601,655	64,376	1,334,906	<b>2,067,515</b>
2009	67,124	598,513	78,302	1,349,596	<b>2,093,535</b>
<b>Total</b>	<b>315,972</b>	<b>2,902,792</b>	<b>291,044</b>	<b>6,430,215</b>	<b>9,940,023</b>

SOURCE: Utah State Tax Commission, Economic and Statistical Unit

## **Notable Changes in Utah Motor Vehicle Laws**

- 1915** Driving age established at 16 years and older.
- 1926** Stop sign law implemented.
- 1935** Alcohol drinking age set at 21 years and older.
- 1967** Illegal to operate a motor vehicle at or above .08 BAC.
- 1969** Motorcycle helmet required for all ages on roads with speed limits 35 mph or higher.
- 1973** Maximum speed limit lowered to 55 mph.
- 1977** Motorcycle helmet law changed, helmets required only for riders under 18 years on all roads.
- 1985** First child restraint law.
- 1986** First seat belt law.
- 1987** Maximum speed limit raised to 65 mph.
- 1992** Illegal for drivers under age 21 years to drive with any detectable amount of alcohol.
- 1996** Maximum speed limit raised to 75 mph.
- 1997** Increased age that children need to be restrained from up to eight years to up to ten years.
- 1999** First Graduated Driver License law implemented.
- 2000** Secondary seat belt law for drivers and all passengers of motor vehicles.
- 2000** Increased age for use of child restraints up to age five years.
- 2007** Hand-held telephone use prohibited, enforced if a moving traffic violation is committed.
- 2008** Increased age for use of child restraints up to age eight years.
- 2008** Maximum speed limit raised to 80 mph on selected parts of rural I-15.
- 2009** All drivers convicted of DUI required to use ignition interlock system.
- 2009** Text messaging prohibited while operating a moving motor vehicle.

## **Changes in Crash Reporting**

- 1991** Amount of property damage required for reportable crashes increased from \$400 to \$750.
- 1996** Amount of property damage required for reportable crashes increased to \$1,000.
- 1997** Private property crashes excluded. Private property crashes accounted for approximately 10% of crashes in previous years.
- 2006** State of Utah Investigating Officer's Report of Traffic Crash DI-9 Form updated.
- 2009** Amount of property damage required for reportable crashes increased to \$1,500.

## Glossary

**Alcohol-Impaired Driver Crash:** A crash in which the driver was cited for driving under the influence, the alcohol test was positive, or if the investigating officer reported alcohol use.

**Alcohol-Impaired Driver Fatal Crash:** A crash resulting in one or more deaths involving at least one driver with a blood alcohol concentration of .08 grams per deciliter or above.

**Contributing Factor:** The circumstances reported by the investigating officer surrounding a crash that contributed to the crash or the crash severity.

**Crash Rate:** Crashes per 100 million vehicle miles traveled unless otherwise specified.

**Death Rate:** Traffic deaths per 100 million vehicle miles traveled unless otherwise specified.

**Fatal Crash:** A crash involving a motor vehicle traveling on a trafficway resulting in the death of at least one person within 30 days of the crash.

**Fatality Analysis Reporting System (FARS):** National data system containing data on all fatal traffic crashes in the U.S.

**Incapacitating Injury:** Any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as needing help from the scene.

**Injury Crash:** A crash in which one or more persons sustained a possible injury, non-incapacitating injury, or an incapacitating injury.

**Miles per Hour (MPH):** A unit of speed expressing the distance traveled (in miles) to the time spent traveling (in hours).

**Motorcycle Crash:** A crash involving a motorcycle or moped.

**Non-Incapacitating Injury:** Any injury, other than a fatal injury or an incapacitating injury, which is evident to observers at the scene of the crash in which the injury occurred. Examples: bruise, cut, bloody nose.

**Out-of-State Driver:** A driver licensed from a state/country other than Utah who is in a crash. Some of these drivers may reside in Utah and have not yet applied for a Utah driver license.

**Possible Injury:** Complaint of pain without visible injury.

**Property Damage Only (PDO) Crash:** A crash which results in damage to the motor vehicle or other property but without injury or death to any person.

**Restraint Use:** Restraint use is reported for occupants in a passenger car, light truck, van, SUV, or large truck. Occupants are coded as restrained if they reported using a shoulder/lap belt, lap belt, or a child safety seat at the scene of the crash. Occupants using only a shoulder strap were reported as being unrestrained. In the majority of cases, restraint use is self-reported by the crash occupant. In the case of fatal or severe injury crashes, the officer determines restraint use.

**Rural:** Counties with 0-100 persons per square mile. Rural counties in Utah are Beaver, Box Elder, Cache, Carbon, Daggett, Duchesne, Emery, Garfield, Grand, Iron, Juab, Kane, Millard, Morgan, Piute, Rich, San Juan, Sanpete, Sevier, Summit, Tooele, Uintah, Wasatch, Washington, and Wayne.

**Speed Crash:** A crash where a driver exceeded posted speed limits or was driving too fast for conditions.

**Teenage Driver Crash:** A crash involving a driver aged 15 to 19 years.

**Urban:** Counties with more than 100 persons per square mile. Urban counties in Utah are Davis, Salt Lake, Utah, and Weber.

**Vehicle Miles Traveled (VMT):** The number of miles traveled in a year for a given area calculated by the Utah Department of Transportation.

**UTAH DEPARTMENT OF PUBLIC SAFETY**

[www.publicsafety.utah.gov](http://www.publicsafety.utah.gov)

**UTAH HIGHWAY SAFETY**

[www.highwaysafety.utah.gov](http://www.highwaysafety.utah.gov)

**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION**

[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)